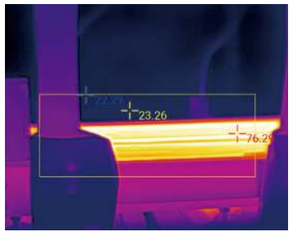
Micro III Series Ultra-Compact High Accuracy Thermographic Module

Micro III professional thermographic module has great advantages of small size, light weight, and low power consumption, thanks to its special technique and optimized circuits. With Matrix III patented image algorithm and intelligent temperature measurement algorithm, it can provide temperature data with high accuracy. Rich interfaces and functions make it easier to use and integrate, providing new solutions for thermal imaging products in various industries.

- Cherry chip, tiny titan

1 Cherry Chip, Tiny Titan

- It has ultra-small volume (26×26×22mm) and neat appearance. Its optical center coincides with geometric center overlap. And its cherry size adds convenience to integration.
- Its ultra-light weight (<20g) adds great power to light unmanned aircraft, small hand-held observation equipment, and machine vision equipment.
- Ultra-low power consumption (Full frame rate 50Hz, power consumption<900mW) brings great technical advantages, needless to worry about heat dissipation.



2 From range to accuracy, meet the demands of system integrators

- Wide range of temperature measurement (-20°C~+550°C) fits various industrial application scenarios.
- The high accuracy of temperature measurement (±3℃ or ±3%) can meet the requirements of temperature measurement application in various industrial scenes.
- With a high frame rate (50Hz), the video is smooth without lag when observing the target moving at high speed moving or with rapid temperature change, which improves detection efficiency and data reliability.
- With high sensitivity (0.05℃), it can distinguish more details and detect farther targets while providing HD images.
- With Matrix III intelligent image algorithm, it can ensure high image quality while outputting accurate temperature data.

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Everything you need is already here. Interfaces, different temperature measurement modes, RoHS, SDK for secondary development...

- Rich data interfaces (5 main types) adapt to more platforms, reducing the R&D cycle and costs.
- 6 temperature measurement modes to help engineers conduct more professional and comprehensive temperature analysis, without missing any abnormal temperature points.
- Comply with RoHS, no worry to export;
- Provide SDK and support user customization of language and reticle, improving practicality and forming customer advantage.

Application Fields

Security monitoring

Night vision/ firefighting helmet

Light UAV

Patrol Robot

Handheld temperature measurement

Main Specifications

Model		MicroIII384T	MicroIII640T
Performance Indicators			
Detector Type		Uncooled VOx Infrared Detector	
Resolution		384×288	640×512
Pixel Pitch		12μm	
Frame Rate		50Hz/30Hz	
Spectral Band		8~14μm	
NETD		⩽50m	
Image Adjustment			
Brightness and Contrast		Manual/automatic/linear	
Polarity		Black-hot/white-hot	
Palette		Multiple types supported	
Reticle		Display/blank/move	
Digital Zoom		1.0 ~ 8.0 × continuous zoom	
Image Processing		Shutter-less/non-uniformity correction/digital filter noise reduction/digital detail enhancement	
Mirroring		Horizontal/Vertical/Diagonal	
Power Supply			
Power Supply Range		4~6V DC	
		3.5 ~ 18 V DC supported by user extension components	
Typical Service Voltage		4VDC	
Typical Power Consumption at 25°C		< 1.0 W (without extension component)	< 1.3 W (without extension component)
		< 1.2 W (with extension component)	< 1.6 W (with extension component)
Power Protection		Over-voltage, under-voltage, reverse connection supported by user extension components	
Interfaces			
Video Output	Analog Video	1-channel PAL system or 1-channel NTSC system	
	Digital Video	BT.656/ LVCMOS/LVDS	
Serial Communication Interface		RS-232/UART	
Type-C USB port		Typical voltage of 5V, supporting video and temperature data transmission, supporting the control protocol	
Button		4 buttons	
Temperature Measurement Performance			
Measurement Range		T series: -20°C ~ +150°C, 0°C ~ +550°C/TH series: 0°C ~ 60°C	
Measurement Accuracy		T series: ±3°C or ±3% of reading (The greater shall prevail) @Ambient temperature of -20°C ~ +60°C±2°C (optional) TH series: ±0.5°C@Target temperature of 33°C ~ 42°C; ±1.0°C@Target temperature of 20°C ~ 33°C; ±1.0°C@Target temperature of 42°C ~ 50°C	
Measurement Tool		Analysis of points, lines, and areas	
Physical Characteristics			
Weight (Without Lens and Extension Components)		21g±3g	
Dimensions (Without Lens)		26mm × 26mm	
Environment Adaptability			
Operating Temperature		T series: -40°C ~ +80°C (-20°C ~ 60°C for temperature measurement; TH series: -10°C ~ +50°C (16°C ~ 32°C for accurate temperature measurement)	
Storage Temperature		-45°C～+85°C	
Humidity		5～95%,non-condensing	
Product Certification		ROSH	